Bulletin of the Russian Academy of Sciences: Physics 2006 vol.70 N4, pages 613-615

Regularization of ill-posed inverse problems in applied spectroscopy

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Abstract

General principles for solving ill-posed inverse problems in applied spectroscopy were considered and an approach to the construction of regularizing functionals for non-Markovian processes was proposed. A regularized algorithm for deconvolution of complex spectra into elementary components was developed. The efficiency of the method was illustrated by the example of the deconvolution of the IR spectrum of 1,2-diphenylethane. © 2007 by Allerton Press, Inc.